

UNCLASSIFIED

PE NUMBER: 0208006F

PE TITLE: Mission Planning Systems

Exhibit R-2, RDT&E Budget Item Justification

DATE

February 2006

BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0208006F Mission Planning Systems

Cost (\$ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	87.659	119.860	146.396	103.021	96.405	98.371	99.378	Continuing	TBD
3858 Mission Planning Systems (MPS)	87.659	119.860	146.396	103.021	96.405	98.371	99.378	Continuing	TBD

(U) **A. Mission Description and Budget Item Justification**

The Mission Planning Systems (formally Air Force Mission Support Systems (AFMSS)) program was established in 1990 to consolidate the many mission planning system development efforts into a single-unit level mission planning system. In FY04, the Mission Planning Systems System Program Office at Hanscom AFB, MA was directed to execute all mission planning development activities and funding was added to accomplish this directive. Today there are two legacy AF mission planning systems migrating to a single, multi-service system, called the Joint Mission Planning System (JMPS). Until all aircraft and weapons are migrated to JMPS, Mission Planning Systems maintains current combat capabilities on the two existing legacy planning systems. Mission Planning Systems is considered a family of products program consisting of the UNIX-based Mission Planning System (Unix-MPS), the PC-based Portable Flight Planning Software (PFPS) and JMPS.

Mission Planning Systems encompasses evolutionary software and hardware development by integrating military and commercial software on Commercial-Off-The-Shelf (COTS) hardware in an open systems architecture. This allows the program to take advantage of the latest PC technology to meet user demands for the most capable systems.

Mission Planning provides comprehensive mission planning tools to aid the warfighter in planning a variety of worldwide missions ranging from homeland security and the global war on terrorism to operations supporting conventional and nuclear armed conflicts. These tools also support peacetime exercises as well as day-to-day training. The UNIX-based MPS operates in combination with the PC-based PFPS to deliver planning capability uploads for aircraft and missile systems, and routing data for platforms utilizing low observable (LO) technology.

Mission Planning Systems supports/will support a variety of aircraft and weapons including (but not limited to) the following: A-10, B-1, B-2, B-52, C-5, C-17, C-130, E-3, E-8, F-15, F-16, F-117, F/A-22, KC-10, KC-135, RC-135, U-2, Joint Strike Fighter (JSF), Air to Ground Munitions (AGM) -130, AGM-142, Joint Direct Attack Munitions (JDAM), Joint Stand Off Weapon (JSOW), Wind Corrected Munitions Dispenser (WCMD), Joint Air-to-Surface, Stand off Munitions (JASSM), Miniature Air Launched Decoy (MALD), Predator, and Global Hawk. Mission Planning Systems software is used in the Cockpit Auxiliary Targeting System (CATS) portion of the Integrated Air Ground Imaging (IAGI) capability for the A-10.

Mission Planning Systems uses an evolutionary acquisition approach, which emphasizes spiral development and the use of Increments (Increment content is described below) to provide capabilities to individual platforms. Additionally, the JMPS architecture ensures common components are utilized among all service platforms and weapons systems where appropriate, thereby reducing duplicative software development efforts and increasing interoperability between services. Further spirals of JMPS will eliminate stovepipe systems. The JMPS framework and common components will require continuous upgrades to: reduce timelines for route planning, transmit near real-time intelligence data to the platforms, increase the accuracy of the mapping products, and provide a Windows-based, COTS-based, user friendly product. JMPS has inter-service leadership and requirements.

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- a. Increment I was the initial development effort, which provided the framework for basic flight planning for all platforms.
- b. Increment II provides for the initial migration of legacy mission planning capability to JMPS for the F-15 and RC-135 aircraft.
- c. Increment III continues the migration of additional aircraft platforms (F/A-22, F-16, B-1B, etc) and weapons (JASSM, etc) to JMPS, upgrades the framework, and develops new common components (e.g. weather, electronic warfare) and unique platform capabilities. Additionally, engineering studies will be conducted to plan and support the migration of future platforms to JMPS.
- d. Increment IV continues the JMPS migration for additional platforms (Tanker Airlift Special Mission (TASM), Intelligence, Surveillance & Reconnaissance (ISR) aircraft, etc..) to JMPS while upgrading the framework and Common Components Capabilities.
- e. Increment V completes the migration to JMPS for additional platforms (e.g. B-2, B-52, etc.) while developing new and improved JMPS capabilities for all platforms. It also conducts studies and analyses, including evaluating new Information Technology (IT) infrastructure technologies, in support of future system upgrades.
- f. Net centric capabilities are/will be developed to provide web based JMPS mission planning to stay in concert with current C2 strategies.

The Mission Planning Systems program is in Budget Activity 7 because it provides for development of technologies and capabilities in support of the currently fielded PFPS and Unix-MPS systems.

(U) **B. Program Change Summary (\$ in Millions)**

	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Previous President's Budget	105.003	138.475	130.626
(U) Current PBR/President's Budget	87.659	119.860	146.396
(U) Total Adjustments	-17.344	-18.615	
(U) Congressional Program Reductions		-16.881	
Congressional Rescissions	-0.081	-1.734	
Congressional Increases	2.100		
Reprogrammings	-16.500		
SBIR/STTR Transfer	-2.863		

(U) **Significant Program Changes:**

- FY05 reduction is for higher AF priorities [defers/delays some efforts (e.g. Airdrop Planning, Sensor Predictions, PGMPS Small Diameter Bomb, Common ISR, Joint Air-to-Surface Stand Off Munitions (JASSM), Predator) until FY07]. Additionally, Congress provided \$2.1M in FY05 for CATS (Cockpit Auxillary Targeting System) development.
- Congress reduced FY06 by \$16.7M for a previous milestone decision delay. Delays development of initial capability for Global Hawk and defers development of mission planning capability for U-2.
- FY07 additions restores funding for deferred FY05 efforts

Exhibit R-2a, RDT&E Project Justification								DATE February 2006	
BUDGET ACTIVITY 07 Operational System Development				PE NUMBER AND TITLE 0208006F Mission Planning Systems			PROJECT NUMBER AND TITLE 3858 Mission Planning Systems (MPS)		
Cost (\$ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
3858 Mission Planning Systems (MPS)	87.659	119.860	146.396	103.021	96.405	98.371	99.378	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

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(U) <u>B. Accomplishments/Planned Program (\$ in Millions)</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Increment II - Migration of mission planning capability to JMPS	6.720	5.509	0.000
(U) Increment III - continues the migration of additional platforms as well as adding upgrades to JMPS	53.501	61.432	54.663
(U) Increment IV - continues to add enhancements and/or upgrades to JMPS framework and common components	3.318	26.061	59.942
(U) Increment V - continues the migration JMPS into additional aircraft platforms	0.000	0.000	3.386
(U) NetCentric Capability - continuing the development and design of web-based tools to provide information to JMPS	0.011	1.332	1.269
(U) Test, Training, and Certification	5.073	10.038	10.764
(U) FFRDC (Mitre)	5.811	5.606	5.941
(U) Program Office Support	13.225	9.882	10.431
(U) Total Cost	87.659	119.860	146.396

(U) **C. Other Program Funding Summary (\$ in Millions)**

	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	
(U) Other Appn									
(U) OPAF PE 0208006F (Other	15.613	15.035	16.337	13.896	14.309	15.338	13.686	Continuing	TBD

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3858 Mission Planning Systems
(MPS)(U) **C. Other Program Funding Summary (\$ in Millions)**

Procurement Air Force, WSC
833040, Theater Air Control
System Improvement)

(U) **D. Acquisition Strategy**

Mission Planning Systems utilizes an evolutionary acquisition approach to develop and deliver an interoperable, network centric, mission planning system tailored for multiple Air Force platforms using open competition and a variety of contract vehicles.

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Exhibit R-3, RDT&E Project Cost Analysis

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(MPS)

(U) <u>Cost Categories</u> (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract</u> <u>Method &</u> <u>Type</u>	<u>Performing</u> <u>Activity &</u> <u>Location</u>	<u>Total</u> <u>Prior to FY</u> <u>2005</u> <u>Cost</u>	<u>FY 2005</u> <u>Cost</u>	<u>FY 2005</u> <u>Award</u> <u>Date</u>	<u>FY 2006</u> <u>Cost</u>	<u>FY 2006</u> <u>Award</u> <u>Date</u>	<u>FY 2007</u> <u>Cost</u>	<u>FY 2007</u> <u>Award</u> <u>Date</u>	<u>Cost to</u> <u>Complete</u>	<u>Total Cost</u>	<u>Target Value</u> <u>of Contract</u>
(U) <u>Product Development</u>												
Mission Planning Enterprise Contract	C/Various	Various		54.050	Feb-05	77.042	Nov-05	100.112	Nov-06	Continuing	TBD	TBD
Systems Engineering and Integration	C/Various	Various		8.593	Jun-05	16.402	Nov-05	18.251	Nov-06	Continuing	TBD	TBD
N/A											0.000	
Subtotal Product Development			0.000	62.643		93.444		118.363		Continuing	TBD	TBD
Remarks:												
(U) <u>Support</u>												
Software Engineering Institute (SEI)	C/T&M	Pittsburgh, PA		0.197	Feb-05	0.462	Dec-05	0.444	Nov-06	Continuing	TBD	TBD
Tecolote	C/T&M	Bedford, MA		0.710	Nov-04	0.428	Nov-05	0.453	Nov-06	Continuing	TBD	TBD
Subtotal Support			0.000	0.907		0.890		0.897		Continuing	TBD	TBD
Remarks:												
(U) <u>Test & Evaluation</u>												
46TW	PO	Eglin AFB, FL		5.073	Oct-04	10.038	Nov-05	10.764	Nov-06	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	5.073		10.038		10.764		Continuing	TBD	TBD
Remarks:												
(U) <u>Management</u>												
FFRDC (MITRE)	SS/T&M	Bedford, MA		5.811	Oct-04	5.606	Nov-05	5.941	Nov-06	Continuing	TBD	TBD
Program Office Support	C/T&M	Various		13.225	Oct-04	9.882	Nov-05	10.431	Nov-06	Continuing	TBD	TBD
Subtotal Management			0.000	19.036		15.488		16.372		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	87.659		119.860		146.396		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile

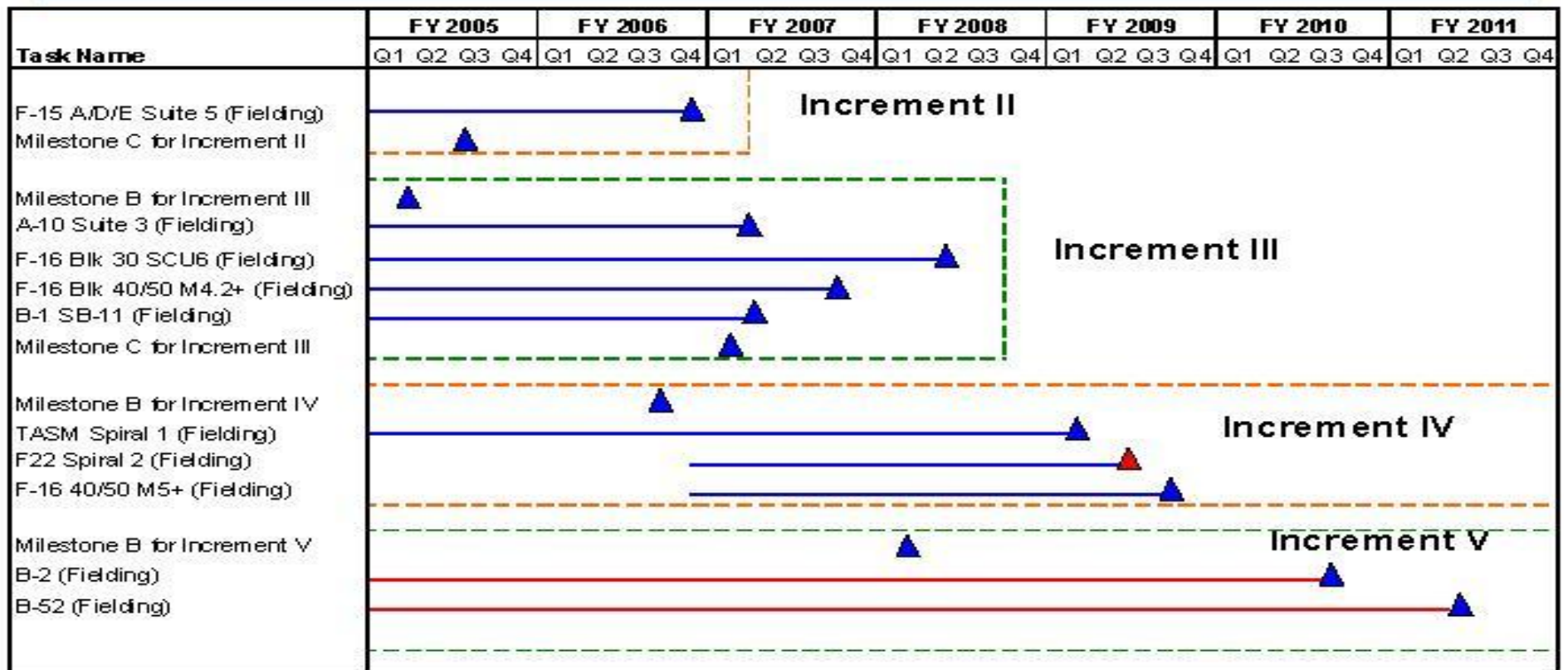
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(MPS)

U.S. AIR FORCE

Mission Planning Systems Schedule

**Acronyms:**

TASM - Tanker Airlift Special Mission

As of: 20 Jan 06

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Exhibit R-4a, RDT&E Schedule Detail

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(MPS)(U) Schedule ProfileFY 2005FY 2006FY 2007

(U) F-15A-E Suite 5 Fielding

4Q

(U) Milestone C for Increment II

3Q

(U) Milestone B for Increment III

1Q

(U) A-10 Suite 3 Fielding

2Q

(U) F-16 Block 30, SCU6 Fielding

2Q

(U) F-16 (Block 40, M4.2+ and Block 50, M4.2+) Fielding

3Q

(U) B-1 SB-11 Fielding

1Q

(U) Milestone C for Increment III

1Q

(U) Milestone B for Increment IV

3Q